



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/712,144	11/15/2000	Christian Braun	ALL.010	8571

7590 10/07/2003  
Jones Volentine LLC  
Suite 150  
12200 Sunrise Valley Drive  
Reston, VA 20191

EXAMINER

WIMER, MICHAEL C

ART UNIT PAPER NUMBER

2821

DATE MAILED: 10/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/712,144

Applicant(s)

BRAUN ET AL.

Examiner

Michael C. Wimer

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other:

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. Claims 1-23,35 and 39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the language, "such as..." in line 6 is not a clear and definite recitation of parameters. This language implies examples but not all of the listing.

Regarding Claim 39, it is not entirely understood because it states that the "communication device comprises a table...". No table has been presented. It is not understood how the device has such a table when it would appear that stored information relating to a particular parameter would be compared and acted upon. Such a routine is not clear in the claim.

Clarification is required to overcome any indefiniteness.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-29,31-33 and 35-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuffner et al (5486836).

Regarding Claims 1-29,31-33 and 35-40, Kuffner et al show a spatial diversity antenna device/system and method of transmitting and/or receiving RF radiation in said device/system comprising a plurality of antennas 302,204 in Figs. 1-4 (or those in Figs. 5 and 6), which are switchable between "predefined" antenna configuration states via switch 306, etc., being distinguished by a set of radiation parameters, and particularly with respect to the radio's position, orientation and the signal strength of the energy received thereby, and all arranged as claimed. The communications device in Fig. 9 is shown in the transmit position where the device contains patches 904 and 906. The pocket position is effected by folding the patch 906 into the keypad position/area. The built-in sensor is connected to the switches 908,910 to provide a system with increased receiver gain and transmit gain. The patches provide different feed connections as claimed. The switches are deemed to be those as claimed, e.g., in Claim 20. The method is set forth and carried out in Kuffner et al by adapting each of the plurality of antenna configuration states which are distinguished by a set of radiation parameters, and selectively switching the switchable antenna structure between the plurality of antenna configurations (clearly set forth in Figures 3-6 and in the flow charts of Figures 7 and 8). Spatial diversity is achieved by varying the polarization between patches. Column 5, lines 39-42 clearly state that the selection made by the switches is based on one or more predetermined signal qualities. By use of an algorithm, signal strength is monitored to select the polarization in the patch that has the highest signal strength. The operation

Art Unit: 2821

environment affects the signal strength, and is associated with the configuration states "being optimized" via the algorithm. The circuit has a control device for receiving the detected physical property of an operation environment.

It would have been obvious to the skilled artisan that the antenna configuration states are predefined as set forth by applicant on page 5, lines 28-32, which merely means a close-by environment. Further regarding Claims 2-7, the specific positions set forth here, including distance in wavelengths, the cellular phone of Kuffner et al. is meant, and recognized by the skilled artisan to be obvious, to be employed in a pocket of the user, attached near the waist, held to the user's head, and merely placed anywhere that outside objects effect its operation in received field strength.

Further regarding Claims 8-16, it is obvious that the "indicator" may merely be the established connection of a call, and thus represents a reflection coefficient of the radio and an operation state that allows the antennas to be switched in a way to maintain sufficient signaling.

Further regarding Claims .

### ***Response to Arguments***

4. Applicant's arguments filed 04 August 2003 have been fully considered but they are not persuasive. Specifically, applicant emphasizes the added language of "predefined and optimized" in the claims of record. However, applicant defines "predefined physical operation environment" as preferably meaning a "close-by environment". This simply could mean the telephone in normal use, brought to the


Art Unit: 2821

user's ear. Close-by effects merely mean that there is a noticeable effect on an antenna's parameter. This is merely normal use. All surrounding environment has an effect on an antenna, especially an electrically small antenna. The antenna's environment cannot be ignored. The added limitations merely describe normal operating conditions of a cellular phone where the antenna, being attached to the casing thereof, is effected in some way by close objects. Regarding new Claim 40, the configurations in Figures 5 and 6 do provide for the plurality of physical antenna configurations being the two antenna elements 502 and 504 connected together by the switching device 506, 508 or 604, 606. The Kuffner et al reference is still applicable to the claims at hand.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Wimer whose telephone number is (703) 305-3555. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don K. Wong can be reached on (703) 308-4856. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Michael C. Wimer  
Primary Examiner  
Art Unit 2821

MCW  
09 September 2003